

Blair Laurence Bilodeau

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EDUCATION

PhD, Statistics, University of Toronto Sept 2018 – Present
Supervisor: Dr. Daniel Roy

Honours BSc, Financial Modelling, University of Western Ontario Sept 2014 – June 2018
GPA: 3.97 / 4.00

RESEARCH GRANTS

NSERC Canada Graduate Scholarship – Doctoral: \$105,000 2019 – 2022

NSERC Canada Graduate Scholarship – Master’s: \$17,500 2018 – 2019

Queen Elizabeth II Graduate Scholarship: \$15,000 (Declined) 2018 – 2019

NSERC Undergraduate Student Research Award: \$4,500 2018

NSERC Undergraduate Student Research Award: \$4,500 2017

RESEARCH POSITIONS

Doctoral Researcher, University of Toronto & Vector Institute Jan 2019 – Present
Supervisor: Dr. Daniel Roy

- Working to bridge the gap between generalization bounds for algorithms on IID data and regret bounds for online learning algorithms by incorporating information about the observed sequence.

Undergraduate Researcher, University of Western Ontario May – Aug 2018
Supervisor: Dr. David Stanford

- Studied the Laplace-Stieltjes transform of the Maximum Priority Process for the Delayed Accumulating Priority Queue. Derived the average waiting time for high priority customers in this regime.

Undergraduate Researcher, University of Western Ontario May – Aug 2017
Supervisor: Dr. David Stanford

- Developed a Python simulation model of the internal medicine ward at London’s University Hospital to study physician-nurse collaboration efficiency, and proposed two novel changes which are to be implemented in a trial by the hospital.

RESEARCH VISITS

Institute for Advanced Study, Princeton, New Jersey Jan – Mar 2020
Program: *Special Year on Optimization, Statistics, and Machine Learning*

Simons Institute for Theoretical Computing, University of California, Berkeley July 2019
Program: *Foundations of Deep Learning*

PREPRINTS

2. **B.L. Bilodeau** and D.A. Stanford. (2019). *The average waiting time for both classes in a delayed Accumulating Priority Queue.*

REFEREED PUBLICATIONS

1. **B.L. Bilodeau**, D.A. Stanford, M. Goldszmidt, A. Appleton. (2019). *Simulated co-location of patients admitted to an inpatient internal medicine teaching unit: Potential impacts on efficiency and physician-nurse collaboration.* INFOR: Information Systems and Operational Research.

CONFERENCE PRESENTATIONS

- The average waiting time for both classes in a delayed Accumulating Priority Queue.*
Canadian Queueing Conference (CanQueue), Toronto, Ontario. Oral. Aug 2019
Southwestern Ontario Graduate Math and Stats (SOGMSC), Guelph, Ontario. Oral. June 2019
Canadian Operational Research Society (CORS), Saskatoon, Saskatchewan. Oral. May 2019
- Simulated co-location of patients admitted to an inpatient internal medicine teaching unit.*
Canadian Queueing Conference (CanQueue), Edmonton, Alberta. Oral. Aug 2018
Operations Research Applied to Health Services (ORAHS), Oslo, Norway. Oral. July 2018

PROFESSIONAL POSITIONS

- Risk Research Intern**, Canada Life Insurance, London, Ontario May – Aug 2016
- Performed statistical analysis for a major mortality study on life-contingent annuities.
- Data Analyst Intern**, Bell Canada, London, Ontario May – Aug 2015
- Predicted construction milestones from historical data for financial planning purposes.
- Level 3 Ice Hockey Referee**, Ontario Hockey Federation, London, Ontario Sept 2010 – Apr 2017

TEACHING POSITIONS

- Teaching Assistant**, University of Toronto
- STA442: Methods of Applied Statistics Fall 2019
 - STA257: Probability and Statistics I Fall 2019
 - STA261: Probability and Statistics II Summer 2019
 - STA457: Time Series Analysis Spring 2019
 - STA355: Theory of Statistical Practice Spring 2019
 - STA347: Probability Theory Fall 2018
 - ACT230: Mathematics of Finance for Non-Actuaries Fall 2018

HONOURS AND AWARDS

- University of Toronto
- E.F. Burton and F.W. Burton Graduate Scholarship 2018
- University of Western Ontario
- Robert and Ruth Lumsden Scholarships in Science 2017
 - Borwein Memorial Prize for top grade in Analysis I 2017
 - Continuing Admission Scholarship 2014 – 2018

ACADEMIC SERVICE

- Treasurer**, Statistics Graduate Student Association, University of Toronto Sept 2019 – Aug 2020